DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE

NH-IM-16-1(92)/(105) Bibb County

OFFICE Preconstruction

P.I. Nos. 311000/311415

DATE

September 20, 1995

FROM

C. Wayne Hutto, Assistant Director of Preconstruction

TO

SEE DISTRIBUTION

PROJECT CONCEPT REPORT APPROVAL **SUBJECT**

Attached for your files is the approval for subject project.

CWH/cj

Attachment

DISTRIBUTION:

John Lively

Bobby Mustin

David Studstill

Herman Griffin

Darrell Elwell

Marion Waters

Toni Dunagan

Paul Liles

Walker Scott

Joe Street

FHWA

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE

NH-IM-16-1(92) and (105) Bibb County

OFFICE Preconstruction

P.I. Nos. 311000 and 311415

DATE August 8, 1995

FROM

TO

Lively, Jr., P.E., Director of Preconstruction

Wayne Shackelford, Commissioner

SUBJECT

PROJECT CONCEPT REPORT

These combined projects are the widening and reconstruction of I-16 from SR 11/Spring Street to SR 87/Coliseum Drive, and the construction of a collector-distributor system. The existing I-16 consists of four, 3.6m lanes with a 12.2m depressed grassed median. The existing major structures are:

LOCATION		DIMENSIONS	SUFF RATING
I-16 over Spring Street	(EBL)	$21.9m \times 11.6m$	90.1
	(WBL)	$23.5m \times 17.9m$	91.1
Second Street Overpass		$42.6m \times 11.6m$	91.4
I-16 over Coliseum Drive	(EBL)	$42.6m \times 11.6m$	94.0
	(WBL)	$42.6m \times 11.6m$	94.0

Accident history for four years within the limits of the proposed project consists of 617 accidents with 305 injuries and 1 fatality. The base year traffic (1995) is 38,000 VPD and the design year traffic (2015) is 65,000 VPD. The posted speed is 90 km/h. The design speeds are 90 km/h for the I-16 mainline, 70 km/h for the proposed collector-distributor system, and 60 km/h for the ramps.

Because of the difficulty in determining an exact point between the end of one project and the beginning of the adjacent project, it is recommended that projects NH-IM-16-1(92) and (105) be combined into one project. It is also recommended that the project be NH-IM-16-1(X), Bibb County, P.I. No. 311XXX. The unit number and the P.I. number would be determined by the Office of Programming.

NH-IM-16-1(X) Bibb County

This project consists of the widening and reconstruction of I-16 from two lanes in each direction to three lanes in each direction separated by a median barrier from SR ll/Spring Street to SR 87/Coliseum Drive (l.lkm) and the construction of parallel eastbound and westbound collector-distributors from Spring Street east to Walnut Creek (2.7km). The proposed typical section would consist of a variable 4.9m-14.6m pavement with 2.4m paved inside shoulders and a variable 2.4m-3.0m paved outside shoulder. The

Wayne Shackelford Page 2 August 8, 1995

NH-IM-16-1 Bibb County

project will improve the existing ramps at Spring Street, the westbound exit ramp at Second Street, and at Coliseum Drive. New ramps will be added for eastbound and westbound entrance from Second Street and eastbound exit to Second Street.

Bridge construction would be as follows:

- 1. The bridge carrying I-16 over Spring Street will be widened to the inside to include one additional eastbound and westbound lane with median barrier. Parallel bridges will be constructed east and west for the collector-distributor.
- 2. Second Street Bridge will be modified to accept an entrance and exit ramp.
- 3. The bridge carrying I-16 over Coliseum Drive will be widened to the inside to include one additional eastbound and westbound lane with median barrier. Parallel bridges will be constructed east and west for the collector-distributor.

Design exceptions will be required for the inside shoulder width at the median and the existing pavement cross slope. Additional right-of-way will be required for implementation. Traffic will be maintained during construction.

Environmental concerns include requiring a COE 404 permit; an Environmental Assessment will be prepared; two businesses displaced; a public hearing will be held; time saving procedures are not appropriate.

The estimated costs for this project are:

	PROPOSED NH-IM-16-1(X)	APPROVED NH-IM-16-1(105)	APPROVED NH-IM-16-1(92)	PROG DATE
Construction (includes E&C				
and inflation)	\$32,932,000	\$2,807,000	\$3,800,000	LR(proposed)
Right-of-Way	\$ 6,350,000		\$ 320,000	LR(proposed)

Utilities*

^{*}City of Macon signed LGPA for utilities on 8-29-85.

Wayne Shackelford Page 3 August 8, 1995

NH-IM-16-1 Bibb County

This project will increase capacity, enhance safety, and reduce congestion along this portion of I-16. I recommend this project concept be approved.

HJL:JDQ/cj

Attachment

CONCUR

Frank L. Danchetz, P.E., Chief Engineer

APPROVE

Larry R. Dreihaup, Administrator, FHWA

APPROVE

Wayne Shackelford, Commission

DEPARTMENT OF TRANSPORTATION

STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE NH-IM-16-1(105) BIBB

NDENCE Atlanta, Georgia 1000

NH-IM-16-1(92) BIBB

P.I. NO'S. 311415 & 311000

DATE JUNE 14, 1995

FROM Bob Mustin, P.E., Project Review Engineer () TW

TO C. Wayne Hutto, Assistant Director of Preconstruction

SUBJECT PROJECT CONCEPT REPORT

The concept report submitted June 8, 1995 has been reviewed and is considered satisfactory except as noted below:

Urban Design was contacted by phone concerning separate estimates for the two projects. Urban Design requested that the two projects be combined into one project due to the difficulty in separating the projects. If the projects will continue to be programmed separately, individual estimates should be provided.

The estimated costs for the projects are as follows:

Construction	\$	23,950,000
Inflation	\$	5,988,000
E & C	\$	2,994,000
Right of Way	\$	6,350,000
Reimbursable Utilities	Ś	?

DTM

c: Walker Scott

DEPARTMENT OF TRANSPORTATION

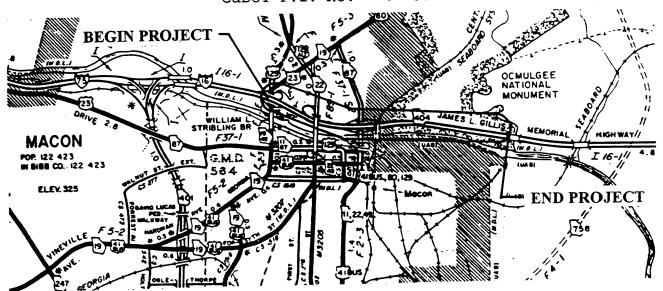
STATE OF GEORGIA

PROJECT CONCEPT REPORT

NH-IM-16-1(105) & NH-IM-16-1(92) BIBB COUNTY WIDENING OF I-16 FROM SR 11 (SPRING STREET) TO SR 87 (COLISEUM DRIVE)

> Federal Route No.: I-16 State Route No. : SR 404

GaDOT P.I. No. : 311415 & 311000



Date of Report: 5-31-95

Date

Date

RECOMMENDATION FOR APPROVAL

Walku (Unicon)

State Unban Design Engineer

State Environmental Engineer

Date

State Traffic Operations Engineer

Date

District Engineer

State Bridge & Structural Design Engineer

PROJECT CONCEPT REPORT

PROJECT NO.: NH-IM-16-1(105) Bibb County P.I. NO.: 311415

NH-IM-16-1(92) Bibb County

311000

PROJECT DESCRIPTION: Widening of I-16 from SR11 ROUTE NO.: SR 404

(Spring Street) to SR 87 (Coliseum Drive) including interchange modification.

LOCATION: I-16 in Macon beginning at Spring Street and extending

east past Coliseum Drive.

TRAFFIC: (two-way ADT) (1995) 19000 (2015) 32500

PDP CLASS: Major NON-CA: (X) CA: () EXEMPT: ()

FUNCTIONAL CLASS: Urban-Principle Arterial-Interstate

EXISTING CONDITIONS

TYPICAL SECTION: 4-3.6m (12 ft) lanes with a 12.19m (40 ft) depressed

median.

POSTED SPEED LIMIT: 88 km/h (55 mph)

MAX. DEGREE OF CURVE: 873m radius (2864.78 ft)

MAX. GRADE: 4%

MAJOR STRUCTURES: Spr: EBL, ID# 021-0119-0 WBL, ID# 021-0120-0	SUFF. RATING 90.1	LENGTH 72 LENGTH 77	WIDTH WIDTH	
ID# 021-0026-0	Street bridge over I-16: SUFF. RATING 91.4	LENGTH 140	WIDTH	38

EBL, ID# 021-0121-0 SUFF. RATING 94.0 LENGTH 140 WIDTH 38 WBL, ID# 021-0122-0 SUFF. RATING 94.0 LENGTH 140 WIDTH 38

ACCIDENT HISTORY: The following is a summary of the accident data as furnished by traffic operations:

	1990	1991	1992	1993
Total Accidents:	124	150	128	175
Total Injuries:	51	69	75	98
Total Fatalities:	2	2	5	1
Accident Rate:	262	264	238	301
Injury Rate:	108	121	140	169
	1990	1991	1992	1993
Statewide Average for Urban FAP Section: (per 100 mil veh mil of travel)				
Accident Rate:	162	154	143	N/A
Injury Rate:	68	62	57	N/A

STATEMENT OF NEED AND PURPOSE OF PROJECT: See attached.

PROPOSED PROJECT CONCEPT

LENGTH: 2.99 km (1.86 miles)

LOCATION: I-16 in Macon beginning at Spring Street and extending

east past Coliseum Drive.

SPEED DESIGN: 88 km/h (55 mph) Mainline

70 km/h (45 mph) CD Collector

60 km/h (35 mph) Ramps

MAX. DEG. of CURVE: Allowed Used
I-16 Mainline 335m(1145.91 ft) 873m(2864.78 ft)
CD Collector 335m(1145.91 ft) 700m(2291.83 ft)
Ramps 39m(127.00 ft) 43m(140.00 ft)

MAX. GRADE Allowed Used 6% 4%

TYPICAL SECTION: 6 - 3.6m (12 ft.) lanes with median barrier with

parallel eastbound and westbound collector distributors

See attached typical section.

MAJOR STRUCTURES:

The bridge carrying I-16 over Spring Street will be widened on the inside to include one additional lane, shoulder and median barrier. Improvement to the outside shoulder. Parallel bridges east and west for collector distributor.

Second Street bridge will be modified in order to except an entrance and exit ramp.

The bridge carrying I-16 over Coliseum drive will be widened on the inside to include one additional lane, shoulder and median barrier. Improvement to the outside shoulder. Parallel bridges east and west for collector distributor.

TYPE ACCESS: I-16 mainline limited access; side streets controlled by permit.

TRAFFIC CONTROL DURING CONSTRUCTION: Traffic will be maintained at all times during construction.

DESIGN VARIANCES REQ'D:

	YES	NO	UNDETERMINED
Horizontal Alignment	()	(X)	()
Vertical Grades	()	(X)	()
Stopping Sight Distance	()	(X)	()
Speed Design	()	·(X)	()
Roadway Width	()	· (X)	()
Shoulder Width	(X)	()	()
Cross Slopes	(X)	()	()
Superelevation Rates	()	(X)	()
Horizontal Clearance	()	(X)	()
Vertical Clearance	()	(X)	()
Bridge Width	()	(X)	()
Bridge Struct. Capacity	()	(X)	()

ESTIMATED COST:

ITEM

RIGHT of WAY	\$	6,350,000
UTILITIES	\$	(LGPA)
CONSTRUCTION INFLATION E & C	\$P \$P \$P	23,950,000 5,988,000 2,994,000
TOTAL CONSTRUCTION	\$	32,932,000

DISPLACEMENTS: 2-Businesses

PERMITS REQUIRED (COE 404, etc.): 404 Permit may be required

LEVEL of ENVIRONMENTAL ANALYSIS: Environmental Assessment

LEVEL of PUBLIC INVOLVEMENT: Public hearing will be required

TIME SAVING PROCEDURES APPROPRIATE? YES () NO (X)

OTHER PROJECTS IN AREA:

PI 311400 Pierce Avenue to the I-16 Intercahnge PI 311410 I-16 from I-75 at Hardeman Avenue to Spring Street

Intersection modifications at SR 11 (Spring Street),
SR 22 (Second Street), and SR 87 (Coliseum Drive) PI 311000

I-475 from Log Cabin to Columbus Road PI 350960

PI 311560 Hardeman Avenue and Forsyth Street

PI 322000 SR 87 (Riverside Drive) from Hall Road to Northside Drive PI 350760 Northside Drive from Forest Hill Road to SR 87 (Riverside Drive)

CONCEPT TEAM MEETING DATE: 12-1-94

The site was visited by the designer on 3-1-95. LOCATION INSPECTION DATE:

RAILROAD INVOLVEMENT: yes

POSSIBLE UNDERGROUND STORAGE TANK SITES: No

POSSIBLE HAZARDOUS WASTE SITES: No

ALTERNATES CONSIDERED: 1) build, 2) no build

This project will be designed in metric units. An IJR or COMMENTS: IMR report may be required due to the modification and improvement to the interstate. Projects: NH-IM-75-2(177) and NH-IM-16-1(104) will be built in conjunction with this project.

> The preliminary cost estimate and design was based on retaining the existing concrete pavement and geometry. There are two areas that would require a design exception. They are the inside shoulder width at the median and the existing pavement cross slope. See the attached typical section.

In order to eliminate the two design exceptions the following would have to be done:

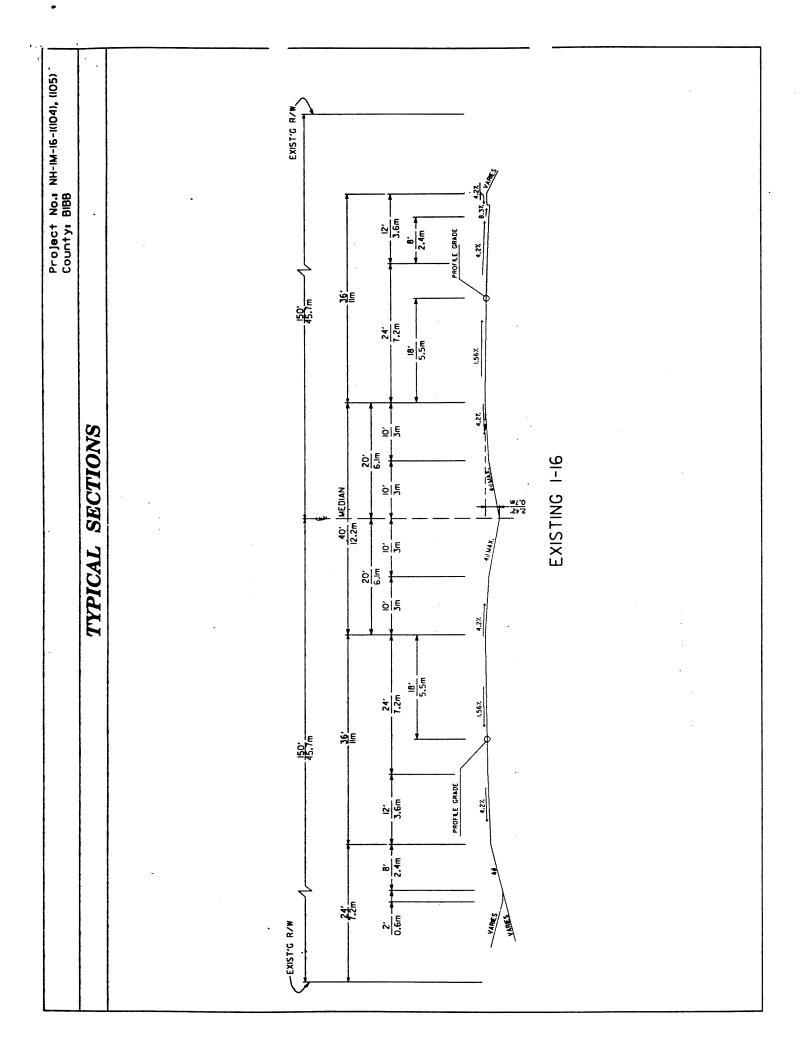
The proposed pavement section would have to change to asphalt.

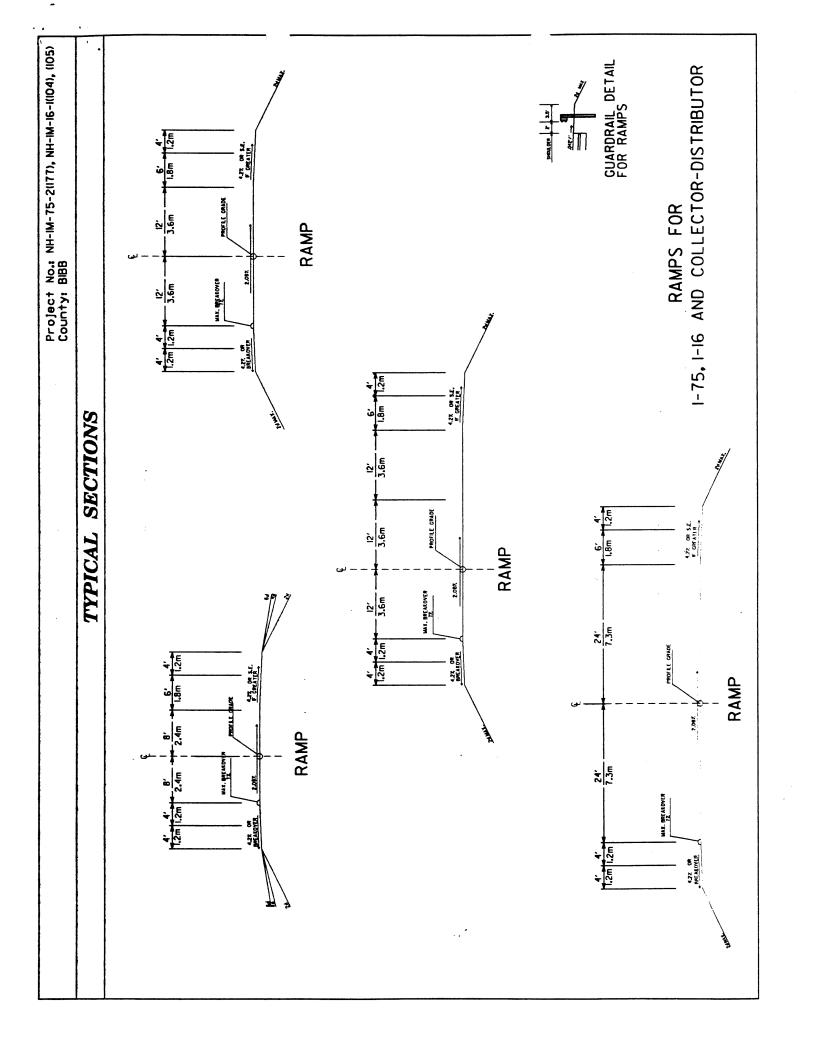
2. The existing concrete pavement would be overlayed in order to achieve the correct inside shoulder width and leveling used to achieve a 2% minimum cross slope.

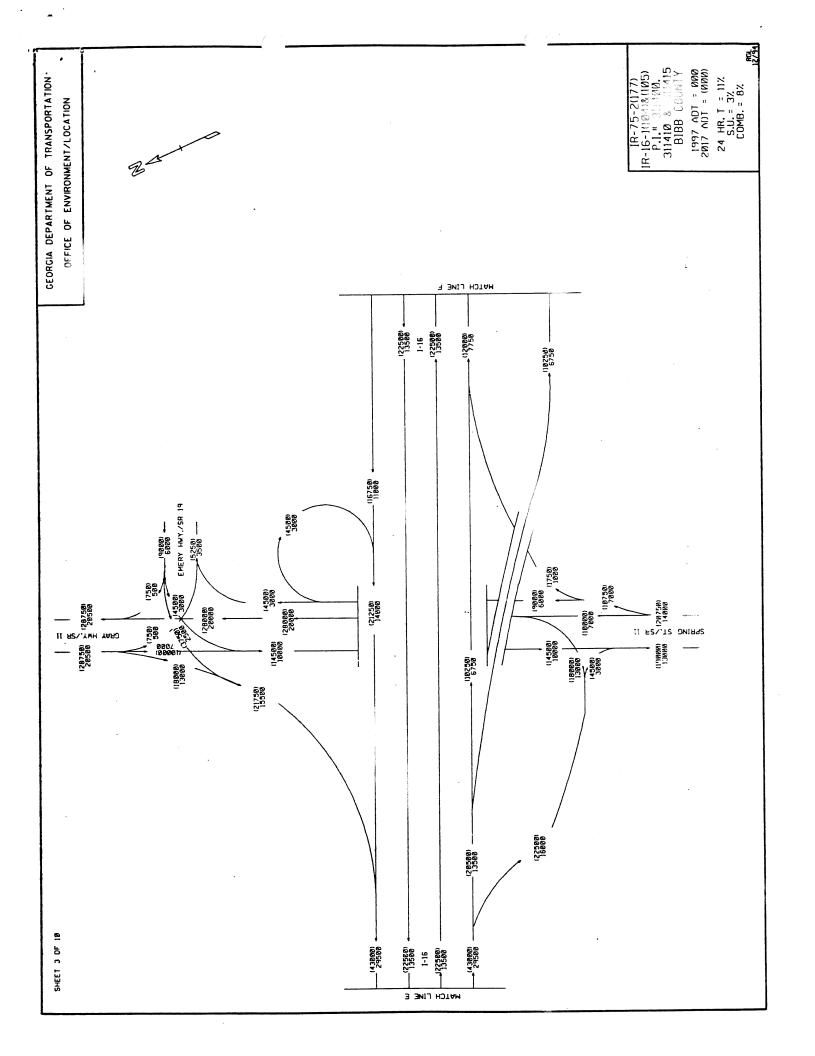
This project would improve existing ramps at the following locations: all ramps at SR 11 (Spring Street), westbound exit ramp at SR 22 (Second Street) and all ramps at SR 87 (Coliseum Drive). New eastbound and westbound entrance ramps were added at SR 22 (Second Street). An eastbound exit ramp at SR 22 (Second Street) was also added.

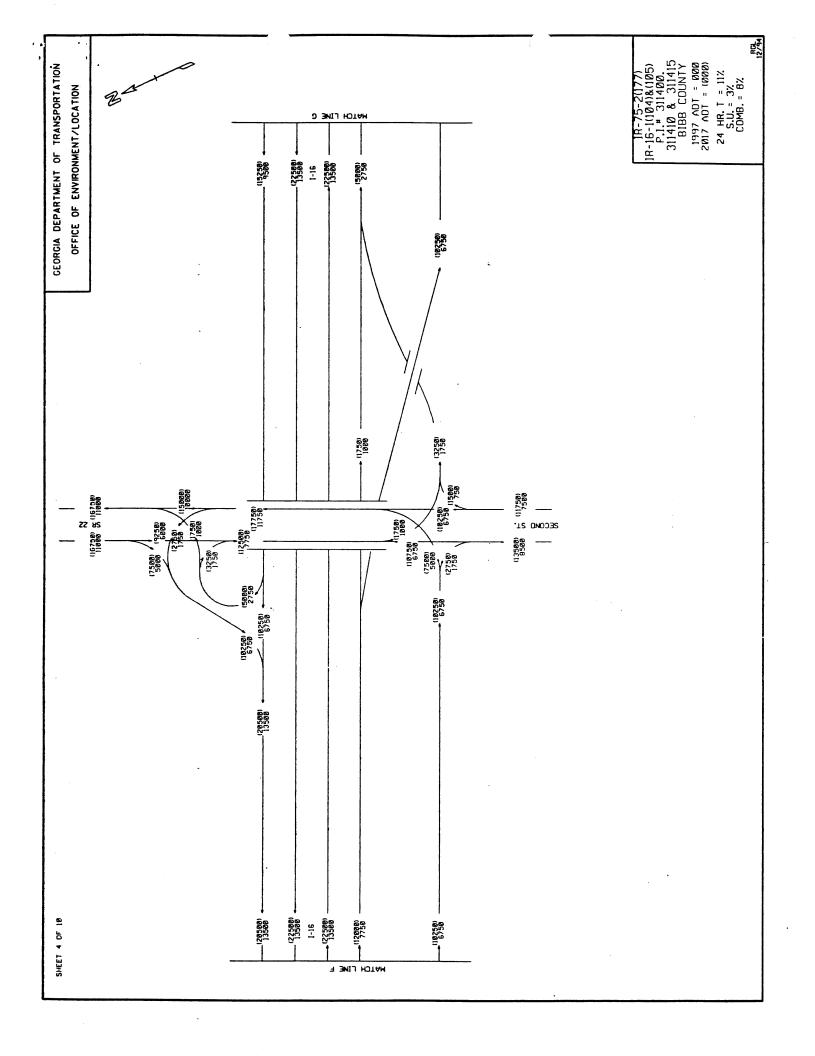
Once design work is started and detailed construction impacts and sequences are defined, the project limits, project sequencing and the use of the existing pavement may need to be redefined.

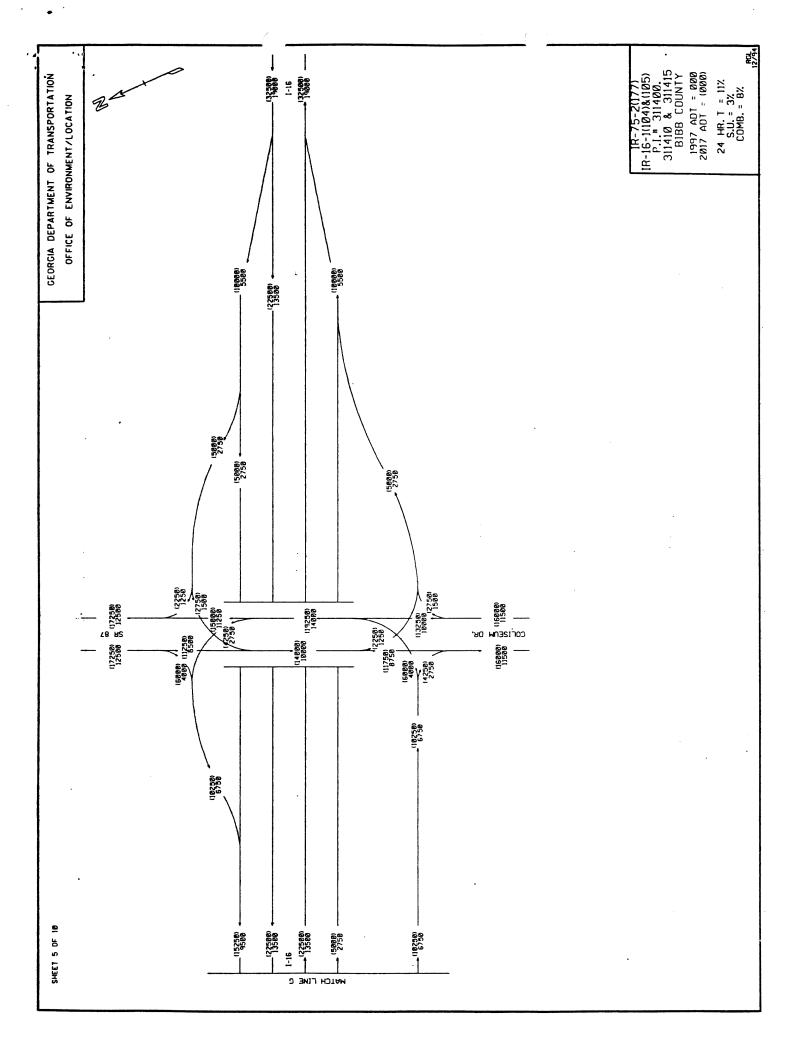
ATTACHMENTS: Typical Sections, Traffic Diagrams, Cost Estimates,
Need & Purpose Statement, Concept Team Meeting Minutes,
Concept Meeting Attendees List, and Letter of Response from
Georgia Power Company.

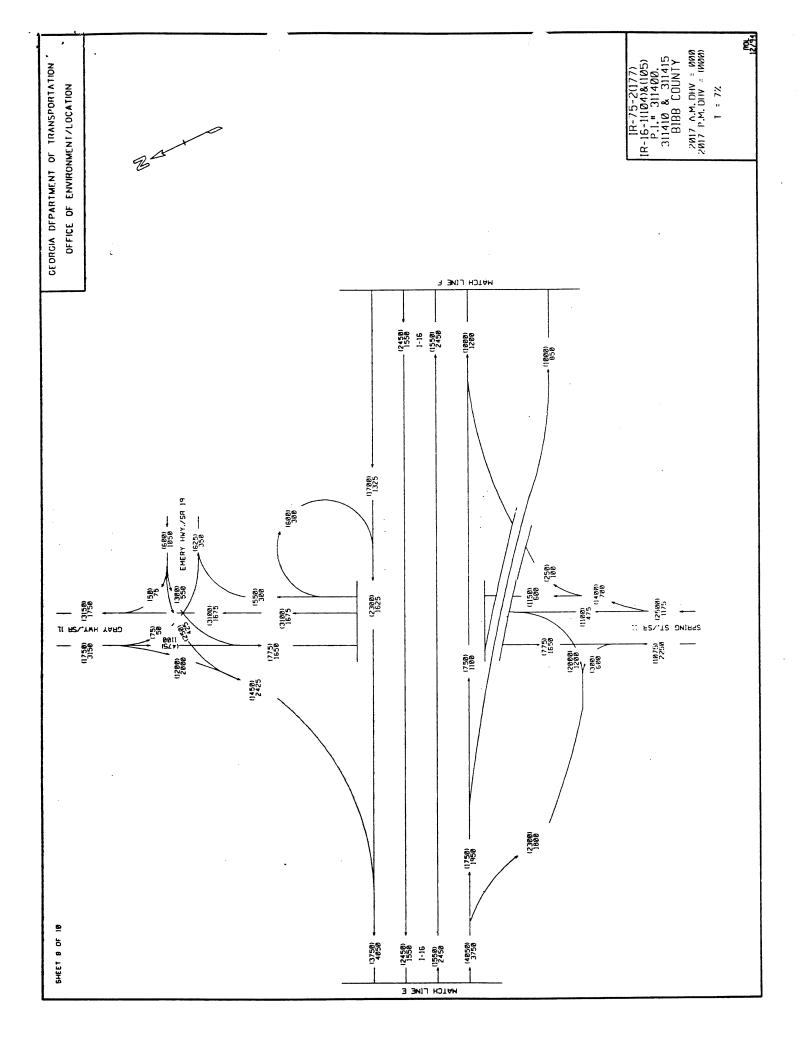


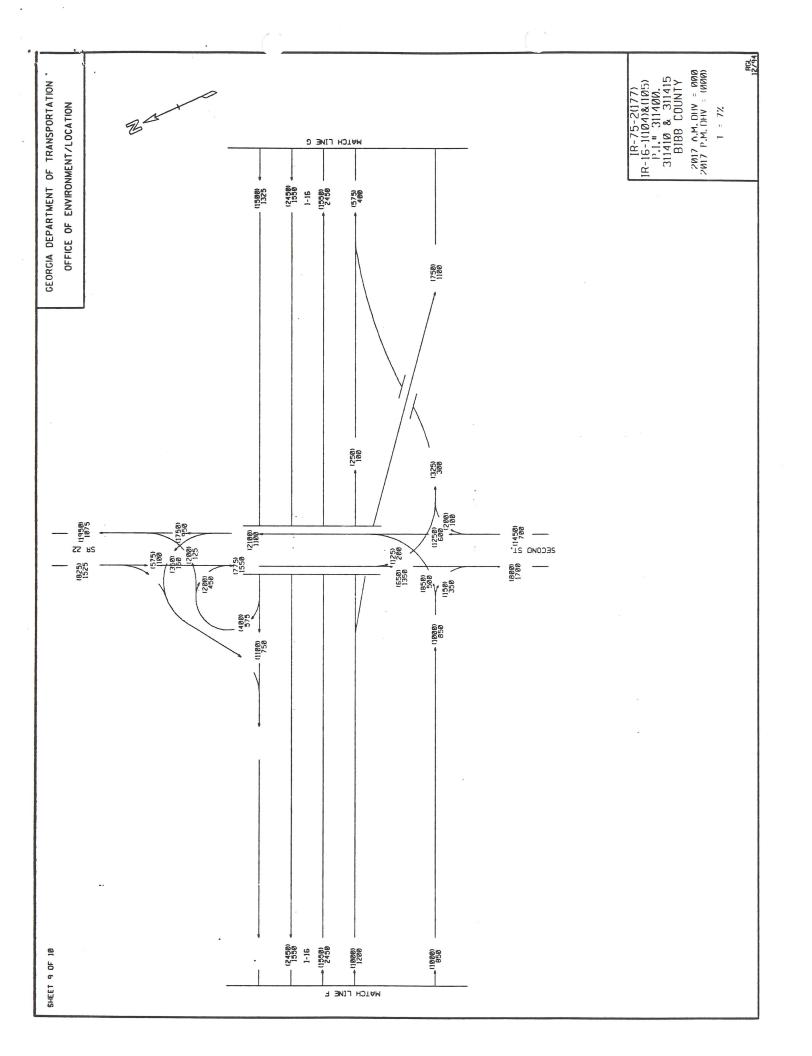


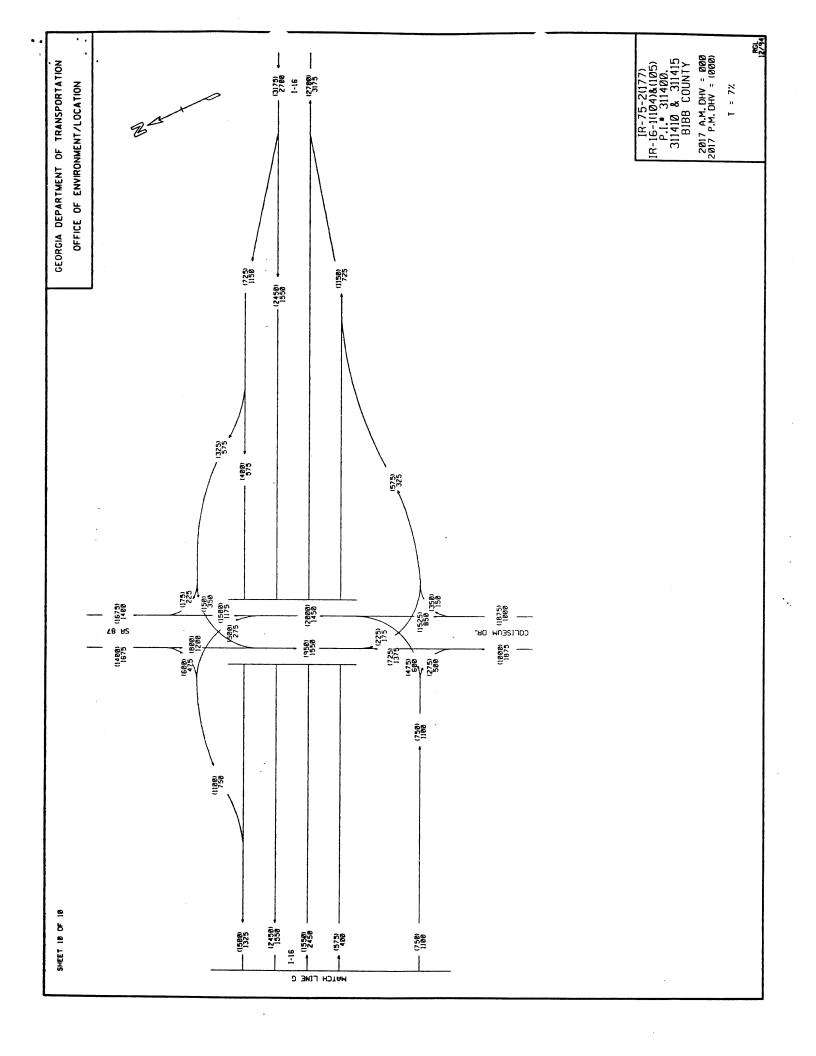












PRELIMINARY COST ESTIMATE URBAN DESIGN OFFICE

	DATE: 4-30-95			PREPARED E	BY: GLO
	PROJECT NO.: NH-IM-16-1			FILE NAME:	311415CE
	NH-IM 16-1 P.I. NO.: 311415 and 31			MILEAGE:	1.86
	PROJECT DESCRIPTION/CONC	EPT:WIDEN		F I-16 FROM	SR 11 EAST
	EXISTING ROADWAY: YES	10 510	07.		
	TRAFFIC (ADT): Existing	: 19000		Design:	32500
	() PROGRAMMING PROCESS (X) CONCEPT DEVELOPMENT () DURING PROJECT DEVEL	OPMENT			
-		PROJECT CO	OSTS		
-		TROODET C	0010		
Α.	RIGHT OF WAY				\$6,350,000
				SUBTOTAL	\$6,350,000
в.	UTILITIES				\$
				SUBTOTAL	\$0
C.,	CLEARING AND GRUBBING				
		61.20	AC	@ \$2,500	\$153,000
D.	EARTHWORK			SUBTOTAL	\$153,000
- •	EMBANKMENT				
	IN-PLACE EMBANKMENT BORROW INCL HAUL	0 567828	CY		\$0 \$3,406,968
-	EXCAVATION				
	SOIL ROCK	7600 0	CY CY		\$38,000 \$0
	MISCELLANEOUS			•	
	WICK DRAINS FILTER FABRIC DRAINAGE MATERIAL DRILL HOLES	0 0 0	LF SY CY LF	a \$7a \$6	\$0 \$0 \$0 \$0
				SUBTOTAL	\$3,444,968

· E. BASE AND PAVING

	AGGREGATE BASE					
	GRADED AGGREGATE	83199	TN	<u>a</u>	\$20	\$1,663,980
	CONCRETE PAVING					
	9" PCC PAVING 11" PCC PAVING ASPH CONC BASE LEVELING TACK COAT	90741 29837 27738 0 0	SY SY TN TN GA	@ @ @	\$21 \$23 \$28 \$31 \$1	\$1,905,561 \$686,251 \$776,664 \$0 \$0
				SU	BTOTAL	\$5,032,456
F.	DRAINAGE					
	CROSS DRAIN SYSTEM					
	15" CONC. PIPE 18" CONC. PIPE 24" CONC. PIPE 30" CONC. PIPE 54" CONC. PIPE 15" F.E.S. 18" F.E.S. 30" F.E.S.	4590 2450 3410 400 160 6 2	LF LF LF LF EA EA	99999	\$20 \$24 \$31 \$39 \$119 \$284 \$314 \$475	\$91,800 \$58,800 \$105,710 \$15,600 \$19,040 \$1,704 \$628 \$1,425
	LONGITUDINAL SYSTEM					
	15" CONC. PIPE 18" CONC. PIPE 24" CONC. PIPE	0 0 0	LF LF LF	<u>a</u>	\$20 \$24 \$31	\$0 \$0 \$0
	DRAINAGE STRUCTURES					
	CATCH BASINS DROP INLETS MANHOLES	0 72 4	EA EA EA	@	\$1,302.24 \$1,608 \$1,245	\$0 \$115,776 \$4,980
	DRAINAGE LUMP SUM					
	(COST PER MILE)	0	MI	@	\$0	\$0
				SU	BTOTAL	\$415,463
G.	CONCRETE WORK					
	APPROACH SLABS MEDIAN BARRIER CURB AND GUTTER VALLEY GUTTER SIDEWALK MEDIAN PAVING DITCH PAVING	2614 13642 0 0 0 540 1729	SY LF LF SY SY SY	9999	\$73 \$32 \$9 \$26 \$17 \$17 \$21	\$190,822 \$436,544 \$0 \$0 \$0 \$9,180 \$36,309 \$672,855
				SU	JBTOTAL	\$6/2,833

н.	TRAFFIC CONTROL	1	LS	e	\$100,000	\$100,000
	·			SUI	BTOTAL	\$100,000
I.	EROSION CONTROL	. 1	LS	e e	\$120,937	\$120,937
				SUI	BTOTAL	\$120,937
J.	GUARDRAIL					
	W-BEAM RAIL T-BEAM RAIL TYPE 1 ANCHORS TYPE 11 ANCHORS	13950 200 6 8	LF LF EA EA	e e	\$11 \$30 \$365 \$850	\$153,450 \$6,000 \$2,190 \$6,800
				SU	BTOTAL	\$168,440
ĸ.	SIGNS, STRIPING, SIGNALS,	LIGHTING				
	STRIPING ROADSIDE SIGNS O.H. SIGNS W/LIGHTS TRAFFIC SIGNALS	1 1 4	LS LS EA EA	e e	\$61,000 \$30,000	\$26,660 \$39,060 \$244,000 \$0
	LIGHTING	1	LS	@	\$418,500	\$418,500
				SU.	BTOTAL	\$728,220
L.	GRASSING/LANDSCAPING			•		
	GRASSING	30.50	AC	e	\$1,750	\$53,375
				SU	BTOTAL	\$53,375
М.	MISCELLANEOUS					
	FIELD ENGINEER OFFICE FENCING RIGHT-OF-WAY MARKERS	1 22399 0	EA LF EA	@	\$37,420 \$15 \$52	\$37,420 \$335,985 \$0
				SU	BTOTAL	\$373,405
N.	MAJOR STRUCTURES					
	BRIDGES	183155	SF	<u>a</u>	\$60	\$10,989,300
	RETAINING WALLS	34625	SF	<u>a</u>	\$45	\$1,558,125
	BOX CULVERTS				·	
	CONCRETE BAR REINF. STEEL	329 49853	CY LB		\$280 \$1	\$92,1 20 \$49, 853
				SU	BTOTAL	\$12,689,398

ESTIMATE SUMMARY

A.	RIGHT OF WAY	\$6,350,000
в.	REIMBURSABLE UTILITIES	\$0
	CONSTRUCTION COST SUMMARY	
C.	CLEARING AND GRUBBING	\$153,000
D.	EARTHWORK	\$3,445,000
E.	BASE AND PAVING	\$5,032,000
F.	DRAINAGE	\$415,000
G.	CONCRETE WORK	\$673,000
н.	TRAFFIC CONTROL	\$100,000
·ı.	EROSION CONTROL	\$121,000
J.	GUARDRAIL	\$168,000
к.	SIGNS, STRIPING, SIGNALS, LIGHTING	\$728,000
L.	GRASSING/LANDSCAPING	\$53,000
M.	MISCELLANEOUS	\$373,000
	SUBTOTAL OF ROADWAY ITEMS	\$11,261,000
, N.	MAJOR STRUCTURES	\$12,689,000
	TOTAL CONSTRUCTION ESTIMATE	\$23,950,000
	5 YEARS OF INFLATION AT 5.00%	\$5,988,000
	10% E & C	\$2,994,000
	TOTAL CONSTRUCTION ESTIMATE	\$32,932,000

Need and Purpose Statement Bibb County

NH-IM-75-2(177); PI# 311400; I-75 from Pierce Avenue to I-16 NH-IM-16-1(104); PI# 311410; I-16 from I-75 to SR 11 NH-IM-16-1(105); PI# 311415; I-16 from SR 11 to SR 87 IM-16-1(92); PI# 311000; I-16 @ SR 11, 22, & 87

The subject projects represent the general upgrading of part of Macon's original Interstate System. As such, the subject sections of I-75 and I-16 are still characterized as having two through lanes in each direction with interchanges generally not reflective of today's design standards. In addition, access between I-16 and downtown Macon is hampered by several partial interchanges, dense interchange spacing, and limited turning movement storage on surface streets within the interchanges. Due to lane configurations and limited section length, the weaving movement between the I-16/Spring Street (SR 11) interchange and the I-75/I-16 interchange is of particular concern. In the vicinity of the I-75/I-16 interchange, the two lane I-75 southbound approach to the I-16 interchange splits with one lane designated for I-16 and one lane for I-75. Although this configuration may have been adequate with the original Interstate System, it is no longer appropriate for either through or local travel demands.

To address these concerns, the Department proposes to widen the subject sections of I-75 and I-16 from the existing four through lanes to six through lanes, three lanes in each direction. To better utilize the existing interchange locations along I-16 and improve the operational and safety aspects of I-16, the Department proposes construction of a collector/distributor (CD) system linking the three downtown interchanges to each other and ultimately to the I-75/I-16 interchange. To better provide for weaving movements, the Department also proposes the reconstruction of the I-75/I-16 interchange to that of a fully directional interchange incorporating the proposed I-16 CD system. In essence, the proposed redesign of this part of Macon's Interstate System will enable separation of through and local traffic onto the Interstate and CD system, respectively.

The subject proposed improvements are integral components to improving the quality and safety of transportation within the Macon area and the State. To that end, the subject proposed improvements are included in the adopted Macon Area Transportation Study and current Transportation Improvement Program.

I-16/I-75 Interchange

Concept Meeting
December 1, 1994
9:30 A.M.
Department of Transportation
Room 401

A concept meeting was held on December 1, 1994 to discuss the scope of work for the following projects:

PI 311400 NH-IM-75-2(177) Pierce Avenue to I-16 Interchange

PI 311410 NH-IM-16-1(104) I-16 from I-75 @ Hardeman Avenue to SR 11 (Spring Street)

PI 311415 NH-IM-16-1(105) I-16 from SR 11 (Spring Street) to SR 87 (Coliseum Drive)

PI 311000 IM-16-1(92) Intersection modification at SR 11 (Spring Street), SR 22 (Second Street), and SR 87 (Coliseum Drive).

The attendance list is attached. The following are the minutes of the meeting:

Joe Palladi - Welcome. This concept includes four projects. This concept influences other projects in the area (ex. Arkwright Road).

Joe Wheeler - Defined the four project numbers and their original scope.

PI 311400 NH-IM-75-2(177) Pierce Avenue to I-16 Interchange

PI 311410 NH-IM-16-1(104) I-16 from I-75 @ Hardeman Avenue to SR 11 (Spring Street)

PI 311415 NH-IM-16-1(105) I-16 from SR 11 (Spring Street) to SR 87 (Coliseum Drive)

PI 311000 IM-16-1(92) Intersection modification at SR 11 (Spring Street), SR 22 (Second Street), and SR 87 (Coliseum Drive)

Three alternates for the I-16/I-75 interchange were presented. Two alternates for the I-75/Pierce Avenue interchange were also presented.

Gary Owens - Noted the proposed let date of 1999. Project will be metric, but the concept materials will be a mix of English and metric. We will look at project limits and possible changes to the existing programmed limits based on funding and constructability for logical termination points. Note: 1999, being in Tier 2, is not funded.

Cora Cook - NEED AND PURPOSE: Upgrade needed, interstate not up to current design guiedlines; outdated interchange design; inadequate for traffic volumes. Propose four to six thru

lanes, and a collector-distributor. See need and purpose statement attached.

Gary Owens - ACCIDENT HISTORY: The accident history is split into two parts: From I-75 @ Riverview Road to Hardeman Avenue the accident rate is 1.5 times the statewide average, and the injury rate is 1.8 times the statewide average. At the interchange and on I-16 from the interchange to the railroad crossing east of Coliseum Drive, the accident rate is 1.6 times the statewide average, and the injury rate is 2.4 times the statewide average.

TRAFFIC COUNTS: From Pierce Avenue to the I-75/I-16 interchange, the 1995 two way ADT is 31000 vpd. The projected 2015 ADT is 47500 vpd. From the I-75/I-16 interchange to Hardeman Avenue, the 1995 two way ADT is 36500 vpd. The projected 2015 ADT is 56500 vpd. On I-16 from the I-75/I-16 interchange to Spring Street, the 1995 two way ADT is 40500 vpd. The projected 2015 ADT is 62000 vpd. Between Spring Street and Coliseum Drive the 1995 two way ADT is 20750 vpd. The projected 2015 ADT is 34250 vpd. On I-16 east of Coliseum Drive the 1995 two way ADT is 14500 vpd. The projected 2015 ADT is 25500 vpd.

<u>TYPICAL SECTIONS</u>: I-75 existing and proposed, proposed ramp typical, I-16 existing and proposed were shown. See attached.

PROPOSED PROJECT DESCRIPTION: Beginning at Pierce Avenue, one lane and a median barrier will be added, giving a total of three 12' (3.6 m) through lanes in each direction. One auxiliary outside lane in both directions will be added on the outside from south of Pierce Avenue to the I-75/I-16 interchange. The ramps in the I-75/I-16 interchange will be widened to accommodate the required extra lanes. One additional lane will be added to I-75 from the I-75/I-16 interchange to Hardeman Avenue. Ramps will be added to I-16 @ Second Street, and a collector-distributor will be added between Spring, Second, and Coliseum Drive.

DESIGN CRITERIA: Mainline will have a minimum speed design of 55 MPH (90 km/h). The collector-distributor will have a minimum speed design of 45 MPH (70 km/h), and the ramps will have a minimum speed design of 35 MPH (60km/h).

MINIMUM RADII: Existing: The maximum degree of curve on I-75 from Pierce Avenue to the interchange is 3 degrees (585 m radius), and the minimum radius is 150' (45 m) at the Pierce Avenue ramps. In the I-75/I-16 interchange the maximum degree of curve is 6 degrees 30 minutes (270 m radius) at the southbound ramp from I-16. On I-16 from the I-75/I-16 interchange to Coliseum Drive the maximum degree of curve is 2 degrees (875 m radius)

mainline, and the minimum radius is 100' (30 m) at the Spring Street ramp.

<u>Proposed</u>: At the railroad bridge a 45 minute (2330 m radius) curve will be used to improve speed design and stage construction. The maximum degree of curve in the I-75/I-16 interchange is 6 degrees (295 m radius) on the I-16 exit ramp to I-75 southbound. The minimum radius on I-16 is 150' (45 m) at the Spring Street ramp.

MAXIMUM GRADES: Existing: The maximum grade on I-75 to the I-75/I-16 interchange is 3.6%. The maximum grade in the I-75/I-16 interchange is 4.5%. On I-16 from Spring Street to Coliseum Drive the maximum grade is 3.6%.

<u>Proposed</u>: The maximum grade proposed for the I-75/I-16 interchange is 4.54%. The maximum grade for the collector-distributor and the ramps is 3.8%. The maximum allowable grade for level 60 MPH is 5%.

RIGHT-OF-WAY: All required right-of-way will be limited access. The drainage system will consist of median barrier inlets and v-gutter, with shoulder ditches beyond the clear zone.

<u>RIGHT-OF-WAY DISPLACEMENTS</u>: Residences at I-16 at the Ocmulgee River and one business at Spring Street will be required right-of-way acquisitions. All necessary right-of-way will be acquired by the D.O.T.

MAJOR STRUCTURES: All existing bridges are in fair to good condition. D.O.T. Maintenance will perform minor repairs to concrete deck and joints prior to the construction of this project. Many of the existing bridges will be utilized by widening and adding shoulders. New bridges will be needed at I-75 over the railroad, in the I-75/I-16 interchange, and at the collector- distributor and proposed additional ramps along I-16.

<u>UTILITIES</u>: Major utilities exist along the project. Macon's main water treatment plant is located just north of I-75 near Pierce Road. There are three pumping stations also along this project. The railroad has an existing track that runs parallel to I-75, through the interchange area and parallel to I-16.

ALTERNATES: A concept review with F.H.W.A. prior to this meeting produced two alternates. The main design objective of the alternates is to have I-75 the major thru interstate, with I-16 as a right exit ramp from I-75 southbound. In addition, I-16 is brought around as a right entrance ramp to I-75 southbound. Both alternates accomplish these goals. The major difference between alternates is the ramp from I-16 to I-75 southbound. The first alternate has a

higher horizontal speed design than the second alternate. Alternate two has a higher vertical speed design than alternate one. Neither alternate is preferred at this time by either the D.O.T. or the F.H.W.A. The Pierce Avenue alternate creates a diamond interchange connecting I-75 directly to Riverside Drive on the west side. South bound traffic will exit by use of a circular ramp that travels over Riverside and ties back to Riverside on the west. At the same location we propose to construct an parallel circular entrance ramp to I-75 south bound.

STAGING: For staging and construction purposes the project will be split into two main sections. From Pierce Avenue to the interchange, the north bound outside lanes and the new north bound railroad bridge would be constructed first; then shifting north bound traffic to the new lanes and finishing the north bound inside lane and median barrier. Next construct the south bound new railroad bridge and inside lanes. Shift south bound lanes to new lanes and finish outside lanes.

The second section, I-75/I-16 interchange and I-16 to Coliseum Drive, is recommended at this time to be constructed as a unit. Construct the collector distributors and connecting ramps first. Then, by utilizing the collectors and ramps with lane shift and detours, construct the new lanes on I-16.

There will be a public hearing and possibly several information meetings as the project progresses. Other projects in the area are:

PI 350960 I-475 from Log Cabin Drive to Columbus Road - concept report being circulated, let date 1996.

PI 311560 Hardeman Avenue and Forsyth Street - working on concept, let date 1997.

PI 322000 SR 87 (Riverside Drive) from Hall Road to Northside Drive - concept meeting has been held, let date 1997.

PI 350760 Northside Drive from Forest Hill Road to SR 87 (Riverside Drive) - working on final plans, let date was 1995, currently 1997.

QUESTIONS AND COMMENTS

Macon/Bibb County: Macon Coliseum is planning multi-million dollar expansion on the east side of the coliseum. What will be the right-of-way requirements on the north side of the interstate? Hopefully existing right-of-way on that side of the interstate will be adequate.

A park is being planned for the area between the interstate and the river stretching from Spring Street to Coliseum Drive. How will this effect those plans? Will the interstate widening and the collector-distributor be bridged or fill sections? Effects on the proposed park will try to be minimized as much as possible. It is still unclear as to what areas have been specifically designated as park space except for two acres and the boat ramp at Spring Street.

Is it possible to coordinate park development with the D.O.T. concept study? The exact areas designated for the park and any requirements need to be clarified before the D.O.T. can make plans regarding park space.

What about the flooding in the past four years? The project will be modeled to determine the possible impacts. This will also help decide which sections are bridges and which are fill sections.

Engineering Services: The design speed on the ramps is 35 MPH. Can right-of-way be purchased to increase that? The cemetery on both sides of I-75 at the interchange, topography, existing development, and utilities restrict the options available.

Do the existing bridges have an asphalt overlay? Yes. Maintenance will remove any current overlay, make necessary repairs, and redo the overlay before the project begins.

Programming: Is the 1999 let date correct? Currently the four projects have different let dates. This needs to be based on the approved concept and possible redefinition of the project limits, scope, and schedules.

Traffic Operations: Will this increase traffic on Second Street? The purpose of the collector-distributor is to distribute the traffic among Spring, Second, and Coliseum Drive in order to relieve some of the pressure on the Spring Street interchange.

Macon/Bibb County: Have peak event traffic counts been considered for the Coliseum Drive exit? No, but they will be taken into consideration if they are provided by the city or the Coliseum.

What about the Music and Sports Halls of Fame that will be using the Coliseum Drive exit? The anticipated traffic will be taken into consideration. The local government will supply special event traffic counts to aid the designer.

Can a left turn from Spring Street to I-16 east be added to the design? It will be looked at, but the proximity of the Second Street exit makes it a low priority.

Traffic Operations: Can the I-75 south/I-16 gore be moved further north from the I-16/Spring Street gore? The cemeteries limit the curvature of the ramps, but it will be looked at. The locations of the splits must be coordinated with signing and marking.

Can the ramp itself be moved north to increase the curvature? It will be difficult to make I-75/I-16 tangent, but it will be looked at in conjunction with signing and marking.

Planning: What about right hand exit expectations for I-16? The alternates address this issue, but because they require more bridges, they will be more expensive. The cost differences are being calculated now.

Instead of the proposed Pierce Avenue interchange, can the old K-Mart property near the river be used for an exit or a collector-distributor? This will be looked at, but again the cemeteries limit the possibilities. The I-16/I-75 interchange may make this proposal impossible to function adequately.

Macon/Bibb County: Can the slip ramps for I-75 south at Pierce Avenue be relocated to the signal at Riverside Plaza? The grade of the ramps would be steeper due to the higher elevation of that intersection. The Riverview Road bridge over I-75 would affect the location and grade of these ramps. This will be expanded on and noted during the preparation of the concept report.

Can the lack of storage on I-75 southbound exit ramp at Pierce Avenue to Riverside Drive be alleviated? This will be studied.

Can the surface streets at Coliseum Drive be widened to provide left turn storage? This will be studied when the traffic counts are received.

Planning: What studies will be required? It is not known how ISTEA will affect this project. This may be the first project that completely falls under all ISTEA guidelines and study requirements. Coordination between the local government, transit operator(s), F.H.W.A. and the Georgia D.O.T. will address the applicability and extent of a Major Investment Study.

Environmental: No representatives

Planning: No additional comments.

District Office: No additional comments.

Right-of Way: No representatives.

Georgia Power: There are two substations that may be affected. One is at Spring Street, between I-16 and the river. The second is on the south side of the river at the railroad bridge.

While the second one is not directly affected, there is a line that crosses the I-16 bridge over Coliseum Drive carrying power to a manufacturer. There is also a line over I-16 by Spring Street. A set of parallel transmission lines and towers run between the I-16 and the river from Spring Street to Coliseum Drive.

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Phone: No representatives.

Cable: No representatives.

Macon Water Authority: There is a water main under the utility bridge at Pierce Avenue.

Atlanta Gas Light: Two 10" lines run under I-75 900' south of Pierce Avenue, in the same location as the water main. There are also 8" high pressure lines at Spring Street and Coliseum Drive.

F.H.W.A.: No representatives.

Gary Owens: The Urban Office awaits the special events traffic from Macon for analysis. The Macon-Bibb Planning and Zoning Commission was sent a copy of the concept prior to the concept meeting and all concerned were asked to provide comments by January 15, 1995. All comments and questions will be included in the concept report and should be addressed to:

Walker Scott

No.2 Capitol Square SW

Room 356

Atlanta, GA, 30334

At the conclusion of the meeting, an alternative concept for the Arkwright Road/I-75 interchange was presented and reviewed.

RECORD OF ATTENDEES:

Gary Owens	D.O.TUrban Design
Joe Wheeler	D.O.TUrban Design
Joe Palladi	D.O.TUrban Design
Larry Choate	Georgia Power
Fred Moody	Georgia Power
Walker Scott	D.O.TUrban Design
Vernon Ryle	MATS MPO
Don Tussing	MATS MPO
Van Etheridge	D.O.TDistrict Office

Lewis Walker
Marvin Helms
D.O.T.-District Office
D.O.T.-District Office
D.O.T.-District Office
D.O.T.-District Office
Atlanta Gas Light Co.

Jim Stancil D.O.T.-Engineering Services
Ken Reeves D.O.T.-Traffic Operations
Del Clippard D.O.T.-Traffic Operations

Hilman Pitts D.O.T.-Utilities
Kenneth H. Sheets City of Macon
Cora Cook D.O.T.-Planning

Johnny Quarles
Reba P. Scott
Patricia Hinman
Vickie Dodson

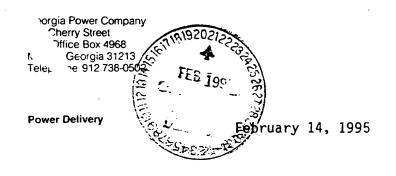
D.O.T.-Preconstruction
D.O.T.-Programming
D.O.T.-Urban Design
D.O.T.-Urban Design

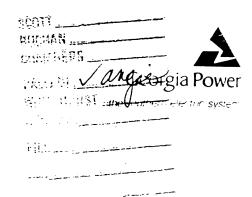
Wouter Gulden D.O.T.-Office of Materials and Research

Sabrina Price D.O.T.-Urban Design R. Nagabhushana Macon Water Authority

Bill Vaughn Bibb County
Bob Fountain Bibb County

Bill Wikle Macon-Bibb County





Mr. Walter Scott, Jr. P. E. State Urban Design Engineer Department of Transportation State of Georgia # 2 Capital Square, Room 356 Atlanta, Georgia 30334

Dear Mr. Scott:

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We would like to respond to the impact the projects listed below will have on Georgia Power Company Transmission/Distribution lines:

<u>Proposed Improvements to Riverside Drive and the Arkwright Road/I-75 Interchange</u> <u>Macon, Georgia</u>

PROJECT	P.I. NUMBER	DESCRIPTION
NH-IM-75-2 (177)	311400	Pierce Avenue to I-16 Interchange
NH-IM-16-1 (104)	311410	I-16 from I-75 at Hardeman Avenue to Spring Street
NH-IM-16-1 (105)	311415	I-16 from Spring Street to Coliseum Drive
IM-16-1 (92)	311000	Intersection modifications at Spring Street, Second Street, and Coliseum Drive

TRANSMISSION CONCERNS

The impact of this project would be from the intersection of I-16 and I-75 to the East side of Martin Luther King Jr. Boulevard.

The existing 115 KV line crosses I-16 from the North of I-16 and continues to the "Spring Street Switching Frame". At the switching frame, the line loops across the Ocmulgee River for the two feeds to the North Macon Substation. These two feeds are the only source to this substation.

The 115 KV line then leaves the "switching frame" and parallels I-16 and the Ocmulgee River to the East side of Martin Luther King, Jr. Boulevard. At this point, the 115 KV line is adjoined by a 69 KV line that crosses I-16 to the North to serve the Bibb Manufacturing Substation.

The 69 KV line_is a radial transmission line that is the only source to Bibb Manufacturing Company. The 115 KV then turns south crossing the Ocmulgee River to the Ocmulgee Street Substation.

Mr. Walter Scott, Jr. P. E. Department of Transportation Page 2 of 4 pages

This 115 KV line that parallels I-16 is the source that serves several substations in Macon, including the Water Works Substation, and other substations not referred to in this letter.

The transmission lines in conflict are constructed mainly on steel towers along I-16. Your proposed ramps and access roads would be built along our existing right-of-way, with no additional right-of-way between I-16 and the river for our lines. Service must be maintained to the three substations that we have in this vicinity.

If we should need to relocate our facilities, steel poles have a twenty--six weeks delivery time at present. The acquisition of right-of-ways will require considerable amount of time, as this is considered a commercial area in Macon.

Also, temporary lines may be needed to avoid work at the intersection. Therefore, the normal sixty-days notice will not be sufficient. In fact this time frame could easily exceed a year, depending on line routes, etc.

DISTRIBUTION CONCERNS

<u>Pierce Avenue Proposal "Alternate A"</u> There are no apparent conflicts obvious if the existing Department of Transportation right-of-way is used.

Pierce Avenue Proposal "Alternate B" Georgia Power has distribution lines parallel and adjacent to Riverside Drive on both the East and West side of Riverside Drive. There will be a significant conflict with the proposed I-75 southbound "off" ramp to Riverside Drive. This ramp will bridge over Riverside Drive. There is a concern for the distribution lines serving the customers on the West side of Riverside Drive. Relocation of the I-75 northbound ramp to Pierce Avenue may impact the distribution line along North Pierce Avenue. This could effect lines in the Sheraton Drive and Inwood Drive areas. The southbound I-75 "on" ramp from Riverside Drive will significantly effect the distribution lines on both sides of Riverside Drive. Work around the intersection of Riverside Drive and Pierce Avenue, to widening Pierce Avenue East of Riverside Drive may conflict with the distribution line along the East side of Riverside Drive at this location.

From the present southbound I-75 "on" ramp from Riverside Drive on to the I-75/I-16 Interchange, there does not appear to be a conflict if the existing right-of-way is used.

There is one overhead line crossing at the Corbin Avenue intersection of Riverside Drive. This line provides service to a pump for the Macon Water Authority.

Mr. Walter Scott, Jr. P. E. Department of Transportation Page 3 of 4 pages

Interchange "Alternates A, B, and C"

From Hardeman Avenue, northbound on I-75 to the interchange, there appears to be no conflicts if widening occurs within existing right-of-way.

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The are two overhead crossings over I-75. One crossing is at Riverside Drive and the other one is at Fourth Avenue.

The proposed southbound I-75 bridge over the Ocmulgee River (to be located North of the existing northbound lane of I-75) appears to conflict with the distribution line to the rear of the houses on Glenridge Drive, and may impact the line on Parkview Drive.

Collector - Distributor

The widening of the northbound I-75 "on" ramp from westbound Spring Street may create a conflict with the existing distribution line along Spring Street, East of I-16.

There is a distribution line crossing the river and crossing I-16 on the West side (upstream side) of Spring Street. This distribution line will be impacted significantly by bridge work on the I-16 bridge over Spring Street, by the Collector - Distributor bridge over Spring Street; and by the proposed "off" ramp from the Collector - Distributor onto Spring Street.

Also, the relocated ramp northbound to I-75 from eastbound Spring Street may be in conflict with the distribution line providing service to the new Health Department located on Emery Highway as well as service to an interstate lighting service point.

There is a significant conflict at Martin Lurther King, Jr. Boulevard. Presently, there are two distribution lines crossing I-16 along both the North and South sides of Martin Luther King, Jr. Boulevard. Conflicts with the I-16 bridge work, the Collector - Distributor, and the proposed "off" ramp to the Martin Luther King, Jr. Boulevard appear certain. Also, there is a possible conflict with the new eastbound I-16 "on" ramp from Spring Street and the distribution line on the south side of Martin Luther King, Jr. Boulevard.

We apologize for this rather lengthy letter, however, hopefully this information will be helpful in your design of I-16 and I-75. Please realize these concerns are preliminary, but we will be happy to provide a more detailed analysis of conflicts when we receive more detailed prints.

Mr. Walter Scott, Jr. P. E. Department of Transportation Page 4 of 4 pages

Thank you for allowing us to work with you on these projects. Please keep us informed so that we can assist the Department of Transportation with our relocation work and together strive to maintain quality customer service for both your customers and ours. If you have any questions, please give us a call. Please call Larry Choate at (912) 784-5870; or Fred Moody at (912) 784-5945.

Sincerely,

LARRÝ N. CHOATE GEORGIA POWER COMPANY

TRANSMISSION ENGINEER

FRED MOODY

GEORGIA POWER COMPANY DISTRIBUTION ENGINEER

LNC/FM/aep

CC: Mr. Kline Petty

Mr. Ed Grubb Mr. Dan Everitt DEPARTMENT OF TRANSPORTATION JUL 27 1995

CTATE OF GEORGIA PRECONSTRUCTION

INTERDEPARTMENT CORRESPONDENCE

NH-IM-75-2(177) Bibb County FILE

office Atlanta, Georgia

NH-IM-16-1(104) Bibb County

July 26, 1995 DATE

NH-IM-16-1(105) Bibb County IM-16-1(92) Bibb County

P.I. Nos. 131(1,400, 311410, 311415, 311000 THE WORLD

Walker W. Scott, Jr., P.E., State Urban Design Engineer Om FROM

Wayne Hutto, P.E., Assistant Director of Preconstruction TO Attention: Johnny Quarles

SUBJECT Proposed Project Concept Reports

The Concept Reports for the above projects were submitted for review on June 6, 1995. The Concept Reports were submitted as a package and two of the projects were combined into one report. During the review process several questions have been raised as to why this was done. The reasons for this are as follows:

- 1. The current schedule calls for all of the projects to be let at or about the same time.
- 2. From a construction standpoint, it would be logical to build all of the projects at the same time. In the case of projects NH-IM-16-1(105) and IM-16-1(92), it would make absolutely no sense to do otherwise.
- 3. At this stage of the project it is very difficult to determine an exact point between the end of one project and the beginning of the adjacent project. The limits of each project may have to be revised as the design is developed.

This office requests that consideration be given to combining and reprogramming two or more of the projects (particularly NH-IM-16-1(105) and IM-16-1(92)) into one project. This will eliminate the coordination that would be required between the four separate projects (and possibly four different contractors) during construction as well as having to readjust the project limits several times during design.

If you have any questions or comments, please contact Joe Wheeler or Gary Owens at 656-5444.

WWS:JDW

cc: Hoyt J. Lively, Jr. Herman Griffin Bob Mustin

DEPARTMENT OF TRANSPORTATION

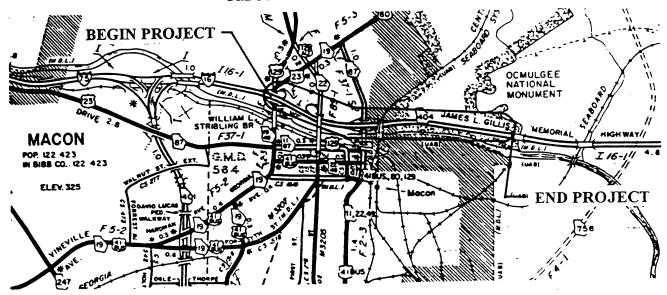
STATE OF GEORGIA

PROJECT CONCEPT REPORT

NH-IM-16-1(105) & NH-IM-16-1(92) BIBB COUNTY WIDENING OF I-16 FROM SR 11 (SPRING STREET) TO SR 87 (COLISEUM DRIVE)

Federal Route No.: I-16
State Route No.: SR 404

GaDOT P.I. No. : 311415 & 311000



Date of Report: 5-31-95

Date

D. 0. T. 66

FROM

DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA

RECEIVED

OFFICE

INTERDEPARTMENT CORRESPONDENCE

Traphico Operations Atlanta, Gabreron

Atlanta, Jacob June 23, 1995

NH-IM-16-1(105) Bibb County FILE

IM-16-1(92) Bibb County

P.I. Nos. 311415 & 311000

DATE aBR In

Mario G. Waters, III, P.E., State Traffic Operations Engineer

TO Wayne Hutto, Assistant Director of Preconstruction

SUBJECT Project Concept Report Review

We have reviewed the concept report on the above projects for the reconstruction of I-16 from Spring Street to Coliseum Drive and for ramp improvements at Spring Street (SR 11), Second Street (SR 22), and Coliseum Drive (SR 87). The I-16 section will be widehed from four lanes with a depressed median to six lanes with median barrier and parallel eastbound and westbound collector-distributors. The project will improve existing ramps at Spring Street, the westbound exit ramp at Second Street, and at Coliseum Drive. New ramps will be added for eastbound and westbound entrance from Second Street and eastbound exit to Second Street.

We will desire to have conduit for ATMS communications, and possibly other items such as sign foundations, included in these projects. The exact number and location of these conduits and other items will need to be determined by our Design Office at the time plans are being developed.

We believe this concept will improve safety and operational capacity along this section of roadway. We therefore find this report satisfactory for approval.

MGW:TOC:dc

Attachment (signature page)

cc: David Studstill Walker Scott (Attn: Joe Wheeler) Bob Mustin, w/attachment Sam Zeigler General Files

DEPARTMENT OF TRANSPORTATION

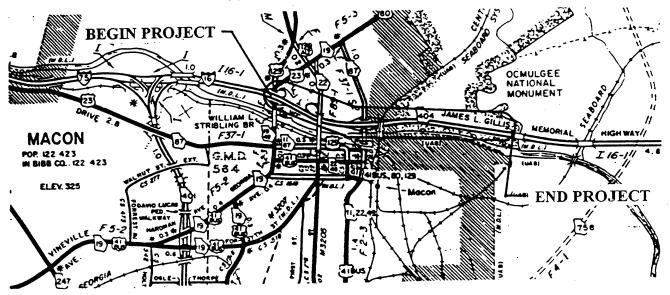
STATE OF GEORGIA

PROJECT CONCEPT REPORT

NH-IM-16-1(105) & NH-IM-16-1(92) BIBB COUNTY WIDENING OF I-16 FROM SR 11 (SPRING STREET) TO SR 87 (COLISEUM DRIVE)

> Federal Route No.: State Route No. : SR 404

311415 & 311000 GaDOT P.I. No.



5-31-95 Date of Report:

RECOMMENDATION FOR APPROVAL **G/G/95** Date State Urban Design Engineer State Environmental Engineer Date M.G. Waters. State Traffic Operations Engineer District Engineer Date State Bridge & Structural Design Engineer Date